RADIAL COMPONENT OF THE MAGNETIC FIELD: ULYSSES

E.J. Smith,* A. Balogh,** M. Burton,* and R. Forsyth,**
*Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91109,
**The Blackett Laboratory, imperial College, London SW7 2BZ.

The Ulysses magnetic field investigation has revealed little, if any, dependence of B_R on latitude. The global field can be accounted for by the heliospheric current sheet only with B_R the same above and below the current sheet except for the reversal in polarity. The strong polar cap fields near the Sun (estimated to be - 7 Gauss) imply a divergence of the magnetic field and solar wind leading to a redistribution of the field. The existence of a uniform field beyond a few solar radii appears to be at variance with earlier reports of a "flux deficit" in outer heliosphere and of a north-south asymmetry in B_R. Recent observations of B_R as Ulysses returns to -30" latitude from the north polar passage will be presented and compared with previous results. In addition, reconciliation of the Ulysses results with the earlier contraclictory-appearing conclusions will be attempted.

Edward J. Smith
Jet Propulsion Laboratory
California Institute of q'ethnology
4800 Oak Grove Drive, M/S 169-506
Pasadena, CA 91109-8099

Tel: 818-354-2248
Fax: 818-354-8895
SPAN: jplsp::esmith

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